



**[6450-01-P]**

**DEPARTMENT OF ENERGY**

**10 CFR Part 430**

**[Docket No. EERE-2010-BT-STD-0011]**

**RIN: 1904-AC22**

**Energy Conservation Standards for Residential Furnace Fans: Public Meeting and Availability of the Preliminary Technical Support Document**

**AGENCY:** Office of Energy Efficiency and Renewable Energy, Department of Energy.

**ACTION:** Notice of public meeting and availability of preliminary technical support document.

**SUMMARY:** The U.S. Department of Energy (DOE) will hold a public meeting to discuss and receive comments on the product classes that DOE plans to analyze for purposes of establishing energy conservation standards for residential furnace fans; the analytical framework, models, and tools that DOE is using to evaluate potential standards for these products; the results of preliminary analyses performed by DOE for these

products; the potential energy conservation standard levels derived from these analyses that DOE could consider for these products; and any other issues relevant to the development of energy conservation standards for residential furnace fans. In addition, DOE encourages written comments on these subjects. To inform interested parties and to facilitate this process, DOE has prepared an agenda, a preliminary technical support document (preliminary TSD), and briefing materials, which are available on the DOE website.

**DATES:** DOE will hold a public meeting on July 27, 2012, from 9:00 a.m. to 4:00 p.m. in Washington, DC. Additionally, DOE plans to allow for participation in the public meeting via webinar. DOE will accept comments, data, and other information regarding this rulemaking before or after the public meeting, but no later than **[INSERT DATE 60 DAYS AFTER PUBLICATION IN THE FEDERAL REGISTER]**. See section IV, “Public Participation,” of this notice of public meeting (NOPM) for details.

**ADDRESSES:** The public meeting will be held at the U.S. Department of Energy, Forrestal Building, Room 8E-089, 1000 Independence Avenue, SW., Washington, DC 20585-0121. Please note that foreign nationals participating in the public meeting are subject to advance security screening procedures which require advance notice prior to attendance at the public meeting. If a foreign national wishes to participate in the public meeting, please inform DOE of this fact as soon as possible by contacting Ms. Brenda Edwards at (202) 586-2945 so that the necessary procedures can be completed. DOE requires visitors to have laptops and other devices, such as tablets, checked upon entry

into the building. Please report to the visitor's desk to have devices checked before proceeding through security.

As noted above, DOE has prepared an agenda, a preliminary TSD, and briefing materials, which are available at:

[http://www1.eere.energy.gov/buildings/appliance\\_standards/residential/furnace\\_fans.html](http://www1.eere.energy.gov/buildings/appliance_standards/residential/furnace_fans.html).

Interested persons may submit comments, identified by docket number EERE-2010-BT-STD-0011 and/or Regulation Identification Number (RIN) 1904-AC22, by any of the following methods:

- Federal eRulemaking Portal: [www.regulations.gov](http://www.regulations.gov). Follow the instructions for submitting comments.
- Email: [FurnFans-2010-STD-0011@ee.doe.gov](mailto:FurnFans-2010-STD-0011@ee.doe.gov) Include the docket number EERE-2010-BT-STD-0011 and/or RIN 1904-AC22 in the subject line of the message.
- Mail: Ms. Brenda Edwards, U.S. Department of Energy, Building Technologies Program, Mailstop EE-2J, Public Meeting for Residential Furnace Fans, EERE-2010-BT-STD-0011, 1000 Independence Avenue, SW., Washington, DC 20585-0121. Telephone (202) 586-2945. If possible, please submit all items on a compact disc (CD), in which case it is not necessary to include printed copies.
- Hand Delivery/Courier: Ms. Brenda Edwards, U.S. Department of Energy, Building Technologies Program, 950 L'Enfant Plaza, SW., 6th Floor, Washington, DC

20024. Telephone (202) 586-2945. If possible, please submit all items on CD, in which case it is not necessary to include printed copies.

Docket: The docket is available for review at [www.regulations.gov](http://www.regulations.gov), including Federal Register notices, Framework Documents, public meeting attendee lists and transcripts, comments, and other supporting documents/materials. All documents in the docket are listed in the [www.regulations.gov](http://www.regulations.gov) index. However, not all documents listed in the index may be publicly available, such as information that is exempt from public disclosure. The [www.regulations.gov](http://www.regulations.gov) web page contains instructions on how to access all documents in the docket, including public comments.

The rulemaking web page can be found at:

[http://www1.eere.energy.gov/buildings/appliance\\_standards/residential/furnace\\_fans.htm](http://www1.eere.energy.gov/buildings/appliance_standards/residential/furnace_fans.htm)

1. This web page contains a link to the docket for this notice at [www.regulations.gov](http://www.regulations.gov).

For detailed instructions on submitting comments and additional information on the rulemaking process, see section IV, “Public Participation,” of this document. For further information on how to submit a comment, review other public comments and the docket, or participate in the public meeting, contact Ms. Brenda Edwards at (202) 586-2945 or by email: [Brenda.Edwards@ee.doe.gov](mailto:Brenda.Edwards@ee.doe.gov).

**FOR FURTHER INFORMATION CONTACT:** Mr. Mohammed Khan, U.S.

Department of Energy, Office of Energy Efficiency and Renewable Energy, Building

Technologies, EE-2J, 1000 Independence Avenue, SW., Washington, DC 20585-0121.

Telephone: (202) 586-2192. E-mail: [Mohammed.Khan@ee.doe.gov](mailto:Mohammed.Khan@ee.doe.gov) .

Mr. Eric Stas, U.S. Department of Energy, Office of the General Counsel, GC-71,  
1000 Independence Avenue, SW., Washington, DC 20585-0121. Telephone: (202) 586-  
9507. E-mail: [Eric.Stas@hq.doe.gov](mailto:Eric.Stas@hq.doe.gov).

For information on how to submit or review public comments and on how to  
participate in the public meeting, contact Ms. Brenda Edwards, U.S. Department of  
Energy, Office of Energy Efficiency and Renewable Energy, Building Technologies  
Program, EE-2J, 1000 Independence Avenue, SW., Washington, DC 20585-0121.  
Telephone: (202) 586-2945. E-mail: [Brenda.Edwards@ee.doe.gov](mailto:Brenda.Edwards@ee.doe.gov).

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### **I. Authority**

Title III, Part B<sup>1</sup> of the Energy Policy and Conservation Act of 1975, as amended, (EPCA or the Act), Pub. L. 94-163 (42 U.S.C. 6291-6309, as codified) sets forth a variety of provisions designed to improve energy efficiency and established the Energy Conservation Program for Consumer Products Other Than Automobiles, a program covering most major household appliances.<sup>2</sup> These include products that use electricity for the purposes of circulating air through duct work, hereinafter referred to as

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<sup>1</sup> For editorial reasons, upon codification in the U.S. Code, Part B was redesignated Part A.

<sup>2</sup> All references to EPCA in this rulemaking refer to the statute as amended through the Energy Independence and Security Act of 2007, Pub. L. 110-140.

“residential furnace fans” or simply “furnace fans,” the subject of today’s notice. (42 U.S.C. 6295(f)(4)(D))

Pursuant to EPCA, DOE’s energy conservation program for covered products consists essentially of four parts: (1) testing; (2) labeling; (3) establishment of Federal energy conservation standards; and (4) certification and enforcement procedures. Subject to certain criteria and conditions, DOE has authority to establish mandatory energy conservation standards for residential furnace fans. EPCA requires DOE to consider and establish energy conservation standards for residential furnace fans by December 31, 2013. (42 U.S.C. 6295(f)(4)(D))

EPCA provides criteria for prescribing new energy conservation standards for residential furnace fans. More specifically, DOE is required to consider standards for these products that: (1) achieve the maximum improvement in energy efficiency that is technologically feasible and economically justified; and (2) result in significant conservation of energy. (42 U.S.C. 6295(o)(2)(A) and (o)(3)(B)) To determine whether a candidate standard is economically justified, DOE will, after receiving comments on the candidate standard, determine whether the benefits of the standard exceed its burdens to the greatest extent practicable, using the following seven factors:

1. The economic impact of the standard on manufacturers and consumers of products subject to the standard;

2. The savings in operating costs throughout the estimated average life of the covered products in the type (or class) compared to any increase in the price, initial charges, or maintenance expenses for the covered products which are likely to result from the standard;
3. The total projected amount of energy savings likely to result directly from the standard;
4. Any lessening of the utility or the performance of the covered products likely to result from the standard;
5. The impact of any lessening of competition, as determined in writing by the Attorney General, that is likely to result from the standard;
6. The need for national energy conservation; and
7. Other factors the Secretary of Energy considers relevant.

(42 U.S.C. 6295(o)(2)(B)(i))

EPCA also directs that DOE may not prescribe an amended or new standard if the standard is likely to result in the unavailability in the United States in any covered product type (or class) of performance characteristics (including reliability), features, sizes, capacities, and volumes that are substantially the same as those generally available in the United States at the time that the standard is prescribed. (42 U.S.C. 6295(o)(4))

Before proposing a standard, DOE typically seeks public input on the analytical framework, models, and tools that DOE will use to evaluate standards for the product at issue and the results of preliminary analyses DOE performed for the product. DOE is



publishing this document to announce the availability of the preliminary TSD, which details the preliminary analyses, discusses the comments DOE received from interested parties on the Framework Document, and summarizes the preliminary results of DOE's analyses. In addition, DOE is announcing a public meeting to solicit feedback from interested parties on its analytical framework, models, and preliminary results.

## **II. History of Energy Conservation Standards Rulemaking for Residential Furnace Fans**

### **A. Background**

There are no current energy conservation standards for residential furnace fans. EPCA, as amended by the Energy Policy Act of 2005 (EPACT 2005), provided DOE authority to consider and prescribe new energy conservation standards for electricity used for purposes of circulating air through duct work by December 31, 2013. (42 U.S.C. 6295(f)(4)(D)) DOE interprets this statutory language as allowing DOE to cover the electricity used by any electrically-powered device used in residential central heating, ventilation, and air-conditioning (HVAC) systems for the purpose of circulating air through duct work.

### **B. Current Rulemaking Process**

In initiating this rulemaking, DOE prepared a Framework Document, "Rulemaking Framework for Furnace Fans," which describes the procedural and analytical approaches DOE anticipates using to evaluate energy conservation standards for residential furnace fans. DOE published a notice that announced both the availability

of the Framework Document and a public meeting to discuss the proposed analytical framework for the rulemaking. That notice also invited written comments from the public. 75 FR 31323 (June 3, 2010). The Framework Document is available at:

[http://www1.eere.energy.gov/buildings/appliance\\_standards/residential/pdfs/furnace\\_fan\\_framework\\_only\\_06-4-10v3.pdf](http://www1.eere.energy.gov/buildings/appliance_standards/residential/pdfs/furnace_fan_framework_only_06-4-10v3.pdf).

DOE held a public meeting on June 18, 2010, at which it presented the various analyses DOE would conduct as part of the rulemaking, such as the engineering analysis, the life-cycle cost (LCC) and payback period (PBP) analyses, and the national impact analysis (NIA). Manufacturers, trade associations, environmental and energy efficiency advocates, and other interested parties attended the meeting. The participants discussed the following major topics: (1) issues pertaining to the scope of coverage of the current rulemaking; (2) product classes; (3) analytical approaches and methods used in the rulemaking; (4) impacts of standards and burden on manufacturers; (5) technology options; (6) distribution channels, shipments, and end users; (7) impacts of outside regulations; and (8) environmental issues.

Comments received since publication of the Framework Document have helped DOE identify and resolve issues related to the preliminary analyses. Chapter 2 of the preliminary TSD, available at the web address given in section III below and in the **ADDRESSES** section of this notice, summarizes and addresses the comments received in response to the Framework Document.

### **III. Summary of the Analyses Performed by DOE**

For the residential furnace fans covered in this rulemaking, DOE conducted in-depth technical analyses in the following areas: (1) engineering; (2) markups to determine product price; (3) life-cycle cost and payback period; and (4) national impacts. The preliminary TSD that presents the methodology and results of each of these analyses is available at:

[http://www1.eere.energy.gov/buildings/appliance\\_standards/residential/furnace\\_fans.htm](http://www1.eere.energy.gov/buildings/appliance_standards/residential/furnace_fans.htm)

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DOE also conducted, and has included in the preliminary TSD, several other analyses that support the major analyses. These analyses include: (1) the market and technology assessment; (2) the screening analysis, which contributes to the engineering analysis; and (3) the shipments analysis, which contributes to the LCC and PBP analysis and NIA. In addition to these analyses, DOE has begun preliminary work on the manufacturer impact analysis and has identified the methods to be used for the LCC subgroup analysis, the emissions analysis, the employment impact analysis, the regulatory impact analysis, and the utility impact analysis. DOE will expand on these analyses in the notice of proposed rulemaking (NOPR).

#### **A. Engineering Analysis**

The engineering analysis establishes the relationship between the manufacturer selling price and product efficiency levels that DOE is evaluating as potential energy conservation standards. This relationship serves as the basis for cost-benefit calculations for individual consumers, manufacturers, and the Nation. The engineering analysis

identifies representative baseline products, which is the starting point for analyzing technologies that provide energy efficiency improvements. “Baseline product” refers to a model or models having features and technologies typically found in minimally-efficient products currently available on the market. After identifying the baseline models, DOE estimated manufacturer selling prices by using a consistent methodology and pricing scheme that includes material costs and manufacturer markups. DOE used these inputs to develop manufacturer selling prices for the baseline and more-efficient designs. Later, in the markups analysis to determine the installed price, DOE converts these manufacturer selling prices into installed prices. In the preliminary TSD, section 2.5 of chapter 2 and chapter 5 each provide details on the engineering analysis and the derivation of the manufacturer selling prices.

#### B. Markups To Determine Installed Price

DOE derives the installed prices for products based on manufacturer markups, distributor markups, contractor markups, and sales taxes. In deriving these markups, DOE determined the major distribution channels for product sales, the markup associated with each party in each distribution channel, and the existence and magnitude of differences between markups for baseline products (baseline markups) and higher-efficiency products (incremental markups). DOE calculates both overall baseline and overall incremental markups based on the product markups at each step in each distribution channel. In the preliminary TSD, section 2.6 of chapter 2 and chapter 6 provide detail on the estimation of markups.

### C. Energy Use Analysis

DOE carries out the energy use analysis to estimate the energy consumption of the residential furnace fans installed in the field. Details of the energy use analysis are provided in section 2.7 of chapter 2 and chapter 7 of the TSD.

### D. Life-Cycle Cost and Payback Period Analyses

The LCC and PBP analyses determine the economic impact of potential standards on individual consumers. The LCC is the total cost of the furnace fan to the customer over the life of the product. The LCC analysis compares the LCCs of products designed to meet possible energy conservation standards with the LCCs of the product likely to be installed in the absence of standards. DOE determines LCCs by considering: (1) total installed cost to the purchaser (which consists of manufacturer selling price, sales taxes, distribution chain markups, and installation cost); (2) the operating cost of the product (energy cost, water and wastewater cost, and maintenance and repair cost); (3) product lifetime; and (4) a discount rate that reflects the real consumer cost of capital and puts the LCC in present-value terms. The PBP represents the number of years needed to recover the increase in purchase price (including installation cost) of higher-efficiency products through savings in the operating cost of the product. PBP is calculated by dividing the incremental increase in installed cost of the higher efficiency product, compared to baseline product, by the annual savings in operating costs. Section 2.8 of chapter 2 and chapter 8 of the preliminary TSD provide details on the LCC and PBP analyses.

#### E. National Impact Analysis

The NIA estimates the national energy savings (NES) and the net present value (NPV) of total consumer costs and savings expected to result from new standards at specific efficiency levels (referred to as candidate standard levels). DOE calculated NES and NPV for each candidate standard level for residential furnace fans as the difference between a base-case forecast (without new standards) and the standards-case forecast (with standards). DOE determined national annual energy consumption by multiplying the number of units in use (by vintage) by the average unit energy consumption (also by vintage). Cumulative energy savings are the sum of the annual NES determined from 2018–2047. The analysis period is 30 years long, which is consistent with other rulemakings and sufficiently long to cover the expected life of the product. The analysis period begins in 2018, the expected year of compliance with the new standard. The national NPV is the sum over time of the discounted net savings each year, which consists of the difference between total operating cost savings and increases in total installed costs. Critical inputs to this analysis include shipments projections, product retirement rates (based on estimated product lifetimes), product installed costs and operating costs, product annual energy consumption, and discount rates. Section 2.10 of chapter 2 and chapter 10 of the preliminary TSD provide details on the NIA.

#### **IV. Public Participation**

DOE invites input from the public on all the topics described above. The preliminary analytical results are subject to revision following further review and input from the public. A complete and revised TSD will be made available upon issuance of a

NOPR. The final rule establishing any new energy conservation standards will contain the final analytical results and be accompanied by a final rule TSD.

DOE encourages those who wish to participate in the public meeting to obtain the preliminary TSD from DOE's website and to be prepared to discuss its contents. Once again, a copy of the preliminary TSD is available at:

[http://www1.eere.energy.gov/buildings/appliance\\_standards/residential/furnace\\_fans.htm](http://www1.eere.energy.gov/buildings/appliance_standards/residential/furnace_fans.htm)

1. However, public meeting participants need not limit their comments to the topics identified in the preliminary TSD. DOE is also interested in receiving views concerning other relevant issues that participants believe would affect energy conservation standards for these products or that DOE should address in the NOPR.

Furthermore, DOE welcomes all interested parties, regardless of whether they participate in the public meeting, to submit in writing by **[INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]** comments and information on matters addressed in the preliminary TSD and on other matters relevant to consideration of energy conservation standards for residential furnace fans.

The public meeting will be conducted in an informal, conference style. A court reporter will be present to record the minutes of the meeting. There shall be no discussion of proprietary information, costs or prices, market shares, or other commercial matters regulated by United States antitrust laws.

After the public meeting and the closing of the comment period, DOE will consider all timely-submitted comments and additional information obtained from interested parties, as well as information obtained through further analyses, and prepare a NOPR. The NOPR will include proposed energy conservation standards for the products covered by the rulemaking, and members of the public will be given an opportunity to submit written and oral comments on the proposed standards.

#### A. Attendance at Public Meeting

The time and date of the public meeting are listed in the **DATES** and **ADDRESSES** sections at the beginning of this NOPM. The public meeting will be held at the U.S. Department of Energy, Forrestal Building, Room 8E-089, 1000 Independence Avenue, SW., Washington, DC 20585-0121. To attend the public meeting, please notify Ms. Brenda Edwards at (202) 586-2945. Any foreign national wishing to participate in the meeting should advise DOE of this fact as soon as possible by contacting Ms. Brenda Edwards to initiate the necessary procedures.

You can attend the public meeting via webinar, and registration information, participant instructions, and information about the capabilities available to webinar participants will be published on the following website:

<https://www1.gotomeeting.com/register/914344761>. Participants are responsible for ensuring their computer systems are compatible with the webinar software.

The purpose of the meeting is to receive comments and to help DOE understand



potential issues associated with this rulemaking. DOE must receive requests to speak at the meeting before 4:00 p.m., July 23, 2012. DOE must receive a signed original and an electronic copy of statements to be given at the public meeting before 4:00 p.m., July 23, 2012.

#### B. Procedure for Submitting Requests to Speak

Any person who has an interest in today's notice or who is a representative of a group or class of persons that has an interest in these issues may request an opportunity to make an oral presentation. Such persons may hand-deliver requests to speak, along with a computer diskette or CD in WordPerfect, Microsoft Word, PDF, or text (ASCII) file format to Ms. Brenda Edwards at the address shown in the **ADDRESSES** section at the beginning of this NOPM between 9:00 a.m. and 4:00 p.m. Monday through Friday, except Federal holidays. Requests may also be sent by mail to the address shown in the **ADDRESSES** section or email to [Brenda.Edwards@ee.doe.gov](mailto:Brenda.Edwards@ee.doe.gov).

Persons requesting to speak should briefly describe the nature of their interest in this rulemaking and provide a telephone number for contact. DOE requests persons selected to be heard to submit an advance copy of their statements at least two weeks before the public meeting. At its discretion, DOE may permit any person who cannot supply an advance copy of their statement to participate, if that person has made advance alternative arrangements with the Building Technologies Program. The request to give an oral presentation should ask for such alternative arrangements.

### C. Conduct of Public Meeting

DOE will designate a DOE official to preside at the public meeting and may also employ a professional facilitator to aid discussion. The meeting will not be a judicial or evidentiary-type public hearing, but DOE will conduct it in accordance with section 336 of EPCA. (42 U.S.C. 6306) A court reporter will record the proceedings and prepare a transcript. DOE reserves the right to schedule the order of presentations and to establish the procedures governing the conduct of the public meeting. After the public meeting, interested parties may submit further comments on the proceedings as well as on any aspect of the rulemaking until the end of the comment period.

The public meeting will be conducted in an informal conference style. DOE will present summaries of comments received before the public meeting, allow time for presentations by participants, and encourage all interested parties to share their views on issues affecting this rulemaking. Each participant will be allowed to make a prepared general statement (within DOE-determined time limits) prior to the discussion of specific topics. DOE will permit other participants to comment briefly on any general statements.

At the end of all prepared statements on a topic, DOE will permit participants to clarify their statements briefly and comment on statements made by others. Participants should be prepared to answer questions from DOE and other participants concerning these issues. DOE representatives may also ask questions of participants concerning other matters relevant to this rulemaking. The official conducting the public meeting will accept additional comments or questions from those attending, as time permits. The

presiding official will announce any further procedural rules or modification of the above procedures that may be needed for the proper conduct of the public meeting.

A transcript of the public meeting will be posted on the DOE website and will also be included in the docket, which can be viewed as described in the Docket section at the beginning of this notice. In addition, any person may buy a copy of the transcript from the transcribing reporter.

#### D. Submission of Comments

DOE will accept comments, data, and other information regarding this rulemaking before or after the public meeting, but no later than the date provided at the beginning of this NOPM. Please submit comments, data, and other information as provided in the **ADDRESSES** section. Submit electronic comments in WordPerfect, Microsoft Word, PDF, or text (ASCII) file format and avoid the use of special characters or any form of encryption. Comments in electronic format should be identified by the Docket Number EERE-2010-BT-STD-0011 and/or RIN 1904-AC22 and, wherever possible, carry the electronic signature of the author. No telefacsimiles (faxes) will be accepted.

Pursuant to 10 CFR 1004.11, any person submitting information that he or she believes to be confidential and exempt by law from public disclosure should submit two copies: one copy of the document including all the information believed to be confidential and one copy of the document with the information believed to be confidential deleted. DOE will make its own determination as to the confidential status

of the information and treat it according to its determination.

Factors of interest to DOE when evaluating requests to treat submitted information as confidential include: (1) a description of the items; (2) whether and why such items are customarily treated as confidential within the industry; (3) whether the information is generally known by or available from other sources; (4) whether the information has previously been made available to others without obligation concerning its confidentiality; (5) an explanation of the competitive injury to the submitting person which would result from public disclosure; (6) a date upon which such information might lose its confidential nature due to the passage of time; and (7) why disclosure of the information would be contrary to the public interest.

## **V. Approval of the Office of the Secretary**

The Secretary of Energy has approved publication of this NOPM.

Issued in Washington, DC, on June 28, 2012.

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Kathleen B. Hogan  
Deputy Assistant Secretary for Energy Efficiency  
Energy Efficiency and Renewable Energy

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